

What is claimed is:

1 1. A connecting structure of a coaxial cable and a coaxial connector for electrically and  
2 mechanically connecting said coaxial cable and said coaxial connector; said connecting structure  
3 comprising:

4 a braided conductor exposed on an end of said coaxial cable;

5 a metal tape conductor inside said braided conductor on said coaxial cable;

6 connecting conductor portions formed continuously on an end of a shell of said coaxial  
7 connector, said connecting conductor portions being inserted into a space between said braided  
8 conductor and said metal tape conductor; and

9 a caulked, cylindrical sleeve having a crimp height  $H_1$ , said sleeve formed by jointing two  
10 opposing almost semi-circular members, an outside contour of each said almost semi-circular  
11 member having a radius  $R_1$  so that said radius  $R_1$  and said crimp height  $H_1$  satisfy the following

12 Equations (1) and (2), respectively:

13 (1)  $R_1 = P_1 \times (D + 2 \times T_1)$  and

14 (2)  $H_1 = P_2 \times R_1$

15 where  $D$  is an outside diameter of said coaxial cable,  $T_1$  is a plate thickness of said sleeve,  $P_1$  is a  
16 numerical value set within the range from 0.45 to 0.48, and  $P_2$  is a numerical value set within the  
17 range from 2.02 to 2.12.

1 2. The connecting structure of a coaxial cable and a coaxial connector according to Claim 1,  
2 further comprising:

3 protruding strips formed on an outer circumference of said caulked sleeve and

4 a joint portion between said almost semi-circular member and said protruding strips;

5 wherein

6 an outside contour of a cross section of said joint portion connects an outside contour of a  
7 cross section of said protruding strips to an outside contour of a cross section of said almost semi-  
8 circular member;

9 said outside contour of said cross section of said joint portion has a curvature radius R2  
10 and said outside contour of the cross section of said protruding strips has a height H2 in a direction  
11 of said crimp height H1, said curvature radius R2 and said height H2 satisfy the following  
12 Equations (3) and (4), respectively:

13 (3)  $R2 = P3 \times T1$  and

14 (4)  $H2 = P4 \times R1$

15 where P3 is a numerical value set within the range from 1.8 to 2.2 and P4 is a numerical value set  
16 within the range from 1.5 to 2.0.

1 3. A connecting structure of a coaxial cable and a coaxial connector for electrically and  
2 mechanically connecting said coaxial cable and said coaxial connector, said connecting structure  
3 comprising:

4 a braided conductor exposed on an end of said coaxial cable;

5 a dielectric material inside said braided conductor on said coaxial cable;

6 connecting conductor portions formed continuously on an end of a shell of said coaxial  
7 connector, said connecting conductor portions being inserted into a space between said braided  
8 conductor and said dielectric material; and

9 a caulked, cylindrical sleeve having a crimp height H1, said sleeve formed by jointing two

10 opposing almost semi-circular members, an outside contour of each said almost semi-circular  
11 member having a radius R1 so that said radius R1 and said crimp height H1 satisfy the following  
12 Equations (1) and (2), respectively:

13 (1)  $R1 = P1 \times (D + 2 \times T1)$  and

14 (2)  $H1 = P2 \times R1$

15 where D is an outside diameter of said coaxial cable, T1 is a plate thickness of said sleeve, P1 is a  
16 numerical value set within the range from 0.45 to 0.48, and P2 is a numerical value set within the  
17 range from 2.02 to 2.12.

1 4. The connecting structure of a coaxial cable and a coaxial connector according to Claim 3,  
2 further comprising:

3 protruding strips formed on an outer circumference of said caulked sleeve and

4 a joint portion between said almost semi-circular member and said protruding strips;

5 wherein

6 an outside contour of a cross section of said joint portion connects an outside contour of a  
7 cross section of said protruding strips to an outside contour of a cross section of said almost semi-  
8 circular member;

9 said outside contour of said cross section of said joint portion has a curvature radius R2  
10 and said outside contour of the cross section of said protruding strips has a height H2 in a direction  
11 of said crimp height H1, said curvature radius R2 and said height H2 satisfy the following  
12 Equations (3) and (4), respectively:

13 (3)  $R2 = P3 \times T1$  and

14 (4)  $H2 = P4 \times R1$

15 where P3 is a numerical value set within the range from 1.8 to 2.2 and P4 is a numerical value set  
16 within the range from 1.5 to 2.0.

1 5. A method for forming a connecting structure of a coaxial cable and a coaxial connector for  
2 electrically and mechanically connecting a coaxial cable and a coaxial connector, said method  
3 comprising:

4 allowing a braided conductor to be exposed from an end of said coaxial cable;

5 inserting connecting conductor portions formed continuously from an end of a shell of  
6 said coaxial connector into a space between said braided conductor and a metal tape conductor  
7 inside said braided conductor;

8 caulking a cylindrical sleeve having a crimp height H1, said step of caulking said sleeve  
9 comprising jointing two opposing almost semi-circular members, each almost semi-circular  
10 member having a radius R1, said radius R1 and said crimp height H1 satisfying the following  
11 Equations (1) and (2), respectively:

12 (1)  $R1 = P1 (D + 2 T1)$

13 (2)  $H1 = P2 R1$

14 where D is an outside diameter of said coaxial cable, T1 is a plate thickness of said sleeve, P1 is a  
15 numerical value set within the range from 0.45 to 0.48, and P2 is a numerical value set within the  
16 range from 2.02 to 2.12;

17 said caulked sleeve further comprises protruding strips formed on an outer circumference  
18 of said caulked sleeve and a joint portion between said almost semi-circular member and said  
19 protruding strips;

20 an outside contour of a cross section of said joint portion connects an outside contour of a

21 cross section of said protruding strips to an outside contour of a cross section of said almost semi-  
22 circular member; and

23 said outside contour of said cross section of said joint portion has a curvature radius R2  
24 and said outside contour of the cross section of said protruding strips has a height H2 in a direction  
25 of said crimp height H1, said curvature radius R2 and said height H2 satisfy the following  
26 Equations (3) and (4), respectively:

27 (3)  $R2 = P3 \times T1$  and

28 (4)  $H2 = P4 \times R1$

29 where P3 is a numerical value set within the range from 1.8 to 2.2 and P4 is a numerical value set  
30 within the range from 1.5 to 2.0.

1 6. A method for forming a connecting structure of a coaxial cable and a coaxial connector for  
2 electrically and mechanically connecting a coaxial cable and a coaxial connector, said method  
3 comprising:

4 allowing a braided conductor to be exposed from an end of said coaxial cable;

5 inserting connecting conductor portions formed continuously from an end of a shell of  
6 said coaxial connector into a space between said braided conductor and a dielectric material inside  
7 said braided conductor;

8 caulking a cylindrical sleeve having a crimp height H1, said step of caulking said sleeve  
9 comprising jointing two opposing almost semi-circular members, each almost semi-circular  
10 member having a radius R1, said radius R1 and said crimp height H1 satisfying the following  
11 Equations (1) and (2), respectively:

12 (1)  $R1 = P1 (D + 2 T1)$

13 (2)  $H1 = P2 \times R1$

14 where D is an outside diameter of said coaxial cable, T1 is a plate thickness of said sleeve, P1 is a  
15 numerical value set within the range from 0.45 to 0.48, and P2 is a numerical value set within the  
16 range from 2.02 to 2.12;

17 said caulked sleeve further comprises protruding strips formed on an outer circumference  
18 of said caulked sleeve and a joint portion between said almost semi-circular member and said  
19 protruding strips;

20 an outside contour of a cross section of said joint portion connects an outside contour of a  
21 cross section of said protruding strips to an outside contour of a cross section of said almost semi-  
22 circular member; and

23 said outside contour of said cross section of said joint portion has a curvature radius R2  
24 and said outside contour of the cross section of said protruding strips has a height H2 in a direction  
25 of said crimp height H1, said curvature radius R2 and said height H2 satisfy the following  
26 Equations (3) and (4), respectively:

27 (3)  $R2 = P3 \times T1$  and

28 (4)  $H2 = P4 \times R1$

29 where P3 is a numerical value set within the range from 1.8 to 2.2 and P4 is a numerical value set  
30 within the range from 1.5 to 2.0.